

MULTILAYER CONDUCTIVE APPLIANCE HAVING WOUND HEALING AND ANALGESIC PROPERTIES

Abstract

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A dressing for promoting healing and pain relief of the body of a living organism having a pathologic condition has at least one layer of conductive material having a resistance no greater than 1000 Ω/cm^2 . When placed proximate a portion of the body of the 10 living organism suffering from the pathologic condition, the dressing alters the electrodynamic processes occurring in conjunction with said pathologic condition to promote healing and pain relief in the living organism. When used as a wound dressing, the conductive material is placed in contact with tissue around the periphery of the wound and 15 with the wound, lowering the electrical potential and resistance of the wound and increasing the wound current. In an exemplary embodiment, the conductive material is a multi-ply nylon fabric plated with silver by an autocatalytic electroless plating process and with the plies in electrical continuity. The dressing provides an antimicrobial 20 and analgesic effect. The dressing may be provided for numerous applications and may include other layers such as an absorbent layer, a semi-permeable layer and additional layer of conductor material. Multilaminate embodiments of the present invention exhibit 25 conductive material concentration gradients and, potentially, a capacitive effect when sequential conductor layers are insulated by intervening layers.